

### MS-M213FHS 2.13 mega pixels 3G—SDI high-sensitivity color board camera **Low distortion lens!**

#### Key feature

- 38(H)×38(W)mm single substrate configuration
- Low distortion lens (M12)
- 1/2.8-inch, 2.13 mega pixels, back-illuminated CMOS sensor with improved near-infrared sensitivity
- 1080p/60p,3G-SDI,wide dynamic range capability
- The simple picture adjustment function adjusts gamma, sharpness, and color gain.
- The D-ZOOM function magnifies a portion of the screen  
Magnification ranges from 1 to 16 times
- DNR can be selected from three levels
- The white point correction function corrects white spots on the screen
- The DEFOG function obtains clear images even in foggy or other scenes
- The long exposure function accumulates images to increase sensitivity and can accumulate up to 32 frames
- The ACE function offers three levels of contrast and brightness
- The privacy mask function hides areas on the screen that you do not want displayed
- The motion detection function outputs motion information when there is a certain level of luminance difference between frames
- The DAY/NIGHT function removes the IR cut filter when illumination is low, such as at night, and allows the camera to capture images up to the infrared wavelength range, simultaneously increasing the sensitivity of the camera
- The ANTI-SAT function prevents saturation in bright areas when in NIGHT mode
- The DIS (Digital Image Stabilizer) function detects image shaking caused by camera shake and stabilizes image output by performing digital correction processing
- The OSD function uses a predefined OSD display to set and display specific functions. 4 languages (English, Japanese, Chinese, and Korean) are supported

1/2.8-inch	Back-illuminated CMOS sensor	2.13 mega pixels 1080p/60p	Near equatorial sensitivity upward
Low distortion lens (M12)	ACE	Privacy masks	DNR
DEFOG	Long time exposure	OSD	Motion detection
D-ZOOM 16x	Mirror image, Flip	Shading correction	VBS output
Day-night	DIS	AI lens drive	ANTI-SAT
M12 lens mount	CS lens mount	φ 14 lens mount	38(H)×38(W)mm 1 board

#### External connectors

#### OSD settings

CN2 : D/N control BM02B-SRSS-TB (Manufactured by JST)

Number	Signal name
1	IN-
2	IN+

CN5 : Power and video output BM08B-SRSS-TB (Manufactured by JST)

Number	Signal name
1	+12V IN
2	GND IN
3	VIDEO OUT
4	VIDEO GND
5	DUMP+
6	DUMP-
7	DRIVE+
8	DRIVE-

CN4 : OSD, camera control BM12B-SRSS-TB (Manufactured by JST)

Number	Signal name
1	-
2	-
3	-
4	-
5	-
6	GND
7	-
8	-
9	-
10	-
11	OSD IN
12	GND

OSD standard setting \*1)

	Function	Summary
1	IRIS	Switching setting between electronic IRIS and mechanical IRIS
2	FOCUS ADJ	Indication of lens focus degree
3	BACKLIGHT	HLC, BLC, and WDR settings
4	DAY&NIGHT	DAY&NIGHT setting
5	COLOR	Auto and manual white balance settings
6	DNR	Digital noise reduction settings
7	IMAGE	Sharpness, gamma, mirror, zoom, ACE, DEFOG, shading, privacy mask settings
8	DIS	Settings to correct images caused by camera shake
9	iMOTION	Motion detection settings
10	SYSTEM	Set camera ID, frame rate, VBS, and camera title

CN1 : Lens Control BM04B-SRSS-TB (Manufactured by JST)

Number	Signal name
1	DUMP +
2	DUMP -
3	DRIVE +
4	DRIVE -

CN6 : HD-SDI connector (MMCX type)

Number	Signal name
1	HD SDI OUT
2	GND

\*1) Do not connect to pins marked with

※ See specifications for details.

#### Specifications

Item	Specifications
Model	MS-M213FHS
Image size	1/2.8-inch back-illuminated color CMOS sensor (IMX291)
Number of effective pixels	1945(H) × 1097(V)
Number of video output pixels	1920(H) × 1080(V)
Unit cell size	2.9 μm(H) × 2.9 μm(V)
Signal output	3G SDI,VBS 1ch
Scanning system	Progressive scan method
Video format	720p/25p, 720p/30p, 1080p/25p, 1080p/30p, 1080p/50i, 1080p/60i, 1080p/50p, 1080p/60p
Synchronizing system	Internal synchronization
S/N	46dB
Minimum illumination	0.1 Lux (1080p/30p, DAY mode, long time exposure OFF)
OSD	Set from board built-in SW and CN4-11 pin
WDR	LOW, MIDDLE, HIGH
DEFOG	↓
ACE	↓
Privacy mask	BOX, POLYGON
DNR	LOW, MIDDLE, HIGH
Motion detection	DET WINDOW, SENSITIVITY, ESTIMATE
Day-night	AUTO, COLOR, B&W
DIS(Digital image stabilizer)	ON/OFF
D-ZOOM	1 to 16 times
Camera shutter	AUTO/MANUAL(×2, ×4, ×8, ×16, ×32, 1/25, 1/30, 1/50, 1/60, 1/100, 1/120, 1/250, 1/700, 1/1000, 1/1600, 1/2500, 1/5000, 1/7000, 1/10000)
Mirror image, Flip	ON/OFF
Lens mount	M12/M12IR/CS/φ 14
Power consumption	1.8W
Power supply	DC+12V ± 10%
External dimensions	38(H)×38 (W)mm
Weight	Approx. 38g(φ 14 type)
Operating temperature	-10°C ~ +50°C
Operating humidity	20%~80%
Components	Camera body, Dedicated harness

#### Model

MS - M213FHS

Lens mount selection

M : M12 Lens mount

MI: M12IR Lens mount

C : CS mount

F : φ 14 mount

Lens mount selection

•M12 lens

3.0mm : JD30 (F=3.0mm, H=84°, V=50°)

3.6mm : JD36 (F=3.6mm, H=74°, V=40°)

3.9mm : JD39 (F=3.9mm, H=70°, V=35°)

4.5mm : JD45 (F=4.5mm, H=63°, V=37°)

6.0mm : JD60 (F=6.0mm, H=49°, V=28°)

17.8mm : JD178 (F=17.8mm, H=17°, V=10°)

2.9mm : TR29 (F=2.9mm, H=85°, V=51°)

3.0mm : AL30 (F=3.0mm, H=84°, V=50°)

(Performance UP version)

•M12IR Lens

3.3mm : YT33 (F=3.8mm, H=106°, V=56°)

3.8mm : YT38 (F=3.8mm, H=86°, V=45°)

6.0mm : YT60 (F=6.0mm, H=54°, V=30°)

•Auto iris CS mount

2.8~12.0mm : RMG2812IR

7.0~22.0mm : RMG0722IR

•Manual Iris CS Mount

2.8~12.0mm : RMM2812IR

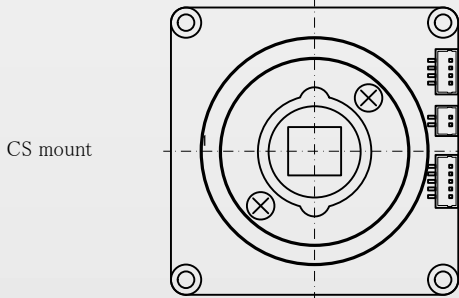
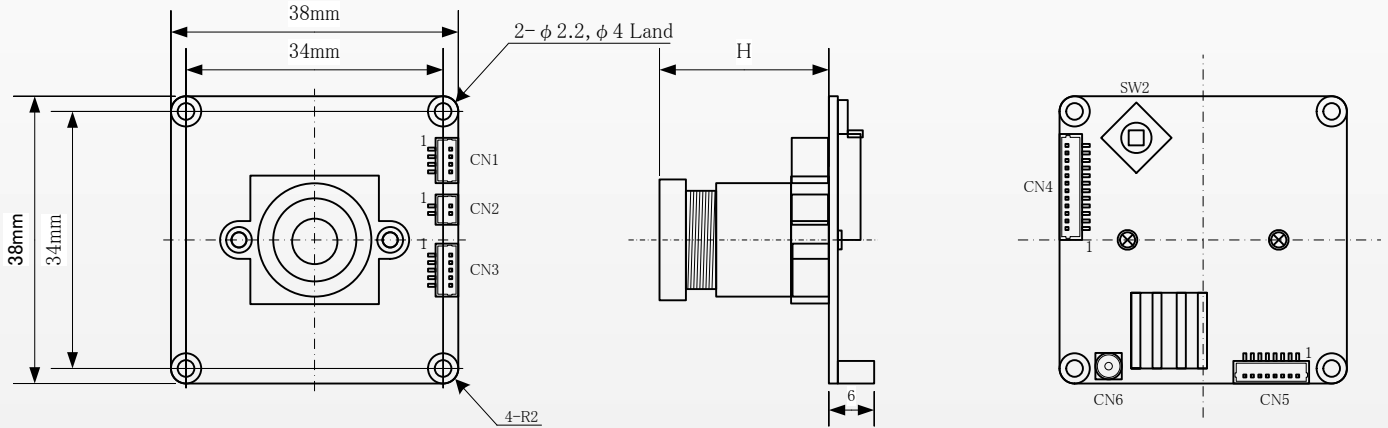
•Auto iris φ 14 mount

2.8~ 12.0mm : RMG2812DNIR

7.0~22.0mm : RMG0722DNIR

Externals

M12, M12IR mount



CS mount

Φ 14 mount

